

## THE REGILIENCE SELF-ASSESSMENT TOOL TO SPOT RISKS OF MALADAPTATION

### What is an adaptation action?

An adaptation action is a specific action or measure that is taken to adapt to certain effects of climate change. There can be different adaptation actions to choose from, which can be referred to as adaptation options.

### What is maladaptation?

Maladaptation refers to the process that an intentional adaptation action may lead to negative effects which increase vulnerability, diminish wellbeing or undermine sustainable development. This can happen the same or other regions, systems, sectors, or social groups than those targeted by the adaptation action.

Many tools provide support to plan good climate adaptation but neglect the risk of maladaptation (see the definitions box). For this reason, the REGILIENCE self-assessment tool explicitly focuses on **spotting potential risk factors for maladaptation** as early as possible. Its objective is to help users (**staff of the competent regional authority/ies for climate adaptation or of other departments and organisations e.g. consultants for the administrations, CSOs dealing with climate adaptation**) to avoid or reduce maladaptation risks **in the planning phase** of adaptation actions.

With this tool, users are guided through a checklist of 17 questions, each one focusing on one risk factor for maladaptation. By simply responding to the question by selecting yes/no/partially for each of the risk factors, the maladaptive potential of the planned adaptation action is checked.

#### Quick overview:

- WHAT?** A checklist for users to self-assess the maladaptation potential of their planned adaptation actions, based on selected risk factors, and spot those factors where further action to avoid maladaptation is needed.
- WHY?** To avoid that adaptation actions cause increased vulnerability or harm to livelihoods, ecosystems, and the economy.
- WHO?** The tool is mainly designed for people or institutions who are in charge of planning and implementing regional adaptation actions. It can also be adopted to be used on a local, individual or national (by both public and private organisations) level. To minimize the risk of subjective judgements, we recommend that more than one person fills in the checklist to compare the results afterwards. This also helps to increase the awareness of maladaptation.
- WHEN?** During the planning phase of a climate adaptation action. Users can also familiarize themselves with the template up-front before starting the planning work, to anticipate potential risks and thereby avoid them even before the check is done. The final assessment should be completed before the adoption of the plan to allow for addressing any identified issues.
- HOW?** The tool is designed to check a concrete adaptation action in the planning phase, you can write down which action you check in the box above the checklist. By going through the checklist of 17 questions and ticking 'yes' or 'no', the users will identify the potential risk factors for maladaptation. The "partially" box should be used when some progress on the aspect has been made, but not sufficiently. Finally, the **comments field** should be used for individual purposes. For example, to write down small reminders, keywords or to-dos. The comment field is not meant for justifying the responses to the checklist questions.
- HOW LONG?** The time required to fill in the self-assessment tool will depend on the complexity of the planned adaptation action. A simple and well-known action can be assessed within less than one hour, while sometimes further consultation is needed.
- NEXT STEPS?** As a general rule, the more questions of the checklist are answered with 'no' or 'partially', the higher is the maladaptation risk. Once the whole checklist has been completed, all questions marked with 'no' shall be further investigated, because they imply a potential risk of maladaptation. They mark specific issues where additional action is needed to minimise or mitigate the risk of negative outcomes. To do so, it is useful to consult the [Climate-ADAPT Adaptation Support Tool](#) and check the steps of the adaptation process specifically linked to potential maladaptation risks.



# CHECKLIST: IDENTIFYING POTENTIAL RISKS OF MALADAPTATION

Check for adaptation action:

## Section: Risks and Vulnerabilities

	YES	PARTIALLY	NO	COMMENTS
<p>1 - Are the full range of <b>current and future climatic risks</b> of the region known/assessed?</p> <p><i>Regional climatic risks can range from floods, heatwaves or droughts to sea-level rise, which can negatively affect people and nature. Existing risks could be intensified by climate change, but also new risks can emerge. As most adaptation actions are designed to have long-term effects, it is important to not only consider the current climate but also expected future climatic risks.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>2 - Is the assessment for the current and future climatic risks of the region based on <b>recent and high-quality climate data and projections</b>?</p> <p><i>To reduce uncertainties about the future, it is important to use recent and high-quality climate data and projections.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>3 - Does the climate risk assessment take into account <b>other future changes</b> which could affect the climatic risk? (e.g. urbanization or behavioural change)</p> <p><i>Climate risks can change or intensify in the future, and they can interact with others, such as health or economic risks, thereby creating complex or compound risks. With this in mind, the use of a range of high-quality and state-of-the-art socio-economic scenarios from trustworthy sources is crucial.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## Section: Identifying Adaptation Options

<p>4 - Were different <b>adaptation options</b> identified that can potentially address the climatic and non-climatic risks of the region?</p> <p><i>In most cases, there are different ways how the desired outcome can be achieved, which correspond to different adaptation options. To select the most promising option, it is important to identify all possible adaptation options first.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>5 - Was the adaptation action for implementation chosen based on <b>comparing and assessing the advantages and disadvantages of different adaption options</b> (e.g. cost-benefit analysis, SWOT analysis)?</p> <p><i>Even though all adaptation options might have the same goal, they can have different advantages and disadvantages. When comparing all options, it is important to weigh all potential costs and gains in the short and long term and choose the most effective and beneficial option. This is also important to reduce the risk of prioritising options due to political preferences or personal favours. The efficiency (how many resources are needed to achieve a certain effect?) and co-benefits (supporting social cohesion, place-making, aesthetics etc.) of the options should also factor into the decision. This is especially important when considering that resources spent for adaptation in most cases represent a sunk cost and are therefore hard to revert. Accordingly, adaptation options are characterised by different degrees of flexibility. In light of uncertainties about the future and the long timeframes of adaptation, flexible options should be preferred over inflexible ones.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## Section: Checking the Adaptation Action

	YES	PARTIALLY	NO	COMMENTS
<p>6 - Are the goals adequately defined, realistic, feasible and clear to everyone involved?</p> <p><i>All affected stakeholders must understand and support the goal of the adaptation action. Setting concrete, realistic, and feasible objectives ensures that all efforts are focused on achieving this objective. This is also important when it comes to the evaluation of the impacts of the adaptation action.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>7 - Does the adaptation action secure benefits in the short and long term?</p> <p><i>Due to the long timeframes of adaptation and ever-changing conditions, the outcomes of an adaptation action may change over time. Only focusing on short-term benefits and easily changeable measures may not be sufficient, therefore long-term options that transform the system need to be considered. Overall, it is important to ensure that the benefits of adaptation action in the short- and long-term outweigh potential negative effects.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>8 - Are all most recent available relevant quantitative and qualitative data:</p> <p>a - collected and analysed?</p> <p>b - sufficient to plan and implement the adaptation action?</p> <p><i>Planning based on assumptions, or “cherry picking of data” is not sufficient to address the region’s climatic risks. Even with the most recent and high-quality data, some uncertainties will remain and should be addressed with approaches like scenario planning, adaptive management, or robust/resilient pathways to deal with these uncertainties.</i></p>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	
<p>9 - Is the adaptation action aligned with corresponding objectives (own, but also local, national and international objectives, including sectoral objectives)?</p> <p><i>Every adaptation action is embedded in a (political) context, and it is important to align the adaptation action with its own adaptation objectives, but also those of other initiatives relevant to the respective geographic area to avoid that they undermine the adaptation action (and vice versa). Internal and external coherence (within the same institution/sector, with other institutions/sectors) can unlock synergies and support the successful implementation of the adaptation action.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>10 - Have the efforts to include the needs and expectations of the stakeholders (especially marginalized groups) been maximised?</p> <p><i>Marginalised and vulnerable groups are expected to be over-proportionately affected by climate change impacts. At the same time, these groups are often overseen and have less voice in decision-making processes. Therefore, efforts are needed to include the needs and expectations of all groups actively, including those who usually lack visibility in political/decision-making processes.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

11 - Does the adaptation action consider and ensure that there are no negative effects in the short- and longterm on...

a - climate mitigation efforts (e.g. not increasing Greenhouse Gas (GHG) emissions or degrading natural GHG storage capacities)?

*Some adaptation actions might increase GHG emissions, such as the use of energy-intensive infrastructures like desalination to enhance freshwater supply or air conditioning to deal with heat waves. Instead of tackling climatic risks in the long term, global warming is intensified through these actions, resulting in even higher adaptation needs in the future.*

b - ecosystems (e.g. not polluting or destructing ecosystems)?

*With the pressure on natural ecosystems being already immense (e.g. intensive agriculture and forestry, infrastructure projects, urbanisation etc.), climate change is increasingly threatening the good status of ecosystems. Given the important role of ecosystems in both climate change mitigation and adaptation (discussed in the context of nature-based solutions), adaptation actions should ensure to not have any detrimental effects on ecosystems (e.g. pollution of air, water, and soil, destruction of ecosystems and impacts on biodiversity) but in the best case enhance the conservation of or create new healthy habitats and species.*

c - resources (e.g. not increasing demand for scarce resources like freshwater)?

*The implementation of adaptation requires resources like funds, expertise, and natural resources to enable a smooth implementation without delays and barriers. As most resources are limited and are often linked to energy-intensive and polluting extraction methods, it is important to use resources in the most efficient way possible. Adaptation actions which increase the demand for resources or encourage the inefficient use of resources should be revised by applying circular economy principles. It is crucial to ensure the efficient use of the resources available, also covering operational and maintenance costs.*

d - the same or other sectors than the one addressed by the adaptation action?

*In most cases, adaptation actions also have impacts on other sectors. Desalination to enhance freshwater supply, for example, not only affects the water sector, but also the energy sector as desalination is highly energy intensive. These potential maladaptive effects can only be revealed through a cross-sectoral perspective on adaptation.*

e - bordering/other geographical areas?

*Impacts of adaptation actions are not restricted to the area targeted by the action, but could also have negative consequences on other geographical areas (e.g. coastal infrastructures which disturb natural processes in a neighbouring area, for example, leading to dune deterioration due to obstructed sand transport), or on other spatial scales (e.g. a water retention-measure and it's operation regime to address droughts on a tributary, may lead to basin-wide impacts on a much larger scale).*

12 - Does the adaptation action increase resilience in the long-term by transforming existing practices, where required (so-called transformational adaptation)?

*Incremental adaptation (minor adjustments within existing systems) may not always be sufficient to keep pace with the intensifying impacts of climate change. In some cases, transformational adaptation actions (representing a fundamental change in the system, which may also involve changes in the values and objectives of actors) are needed to foster the long-term resilience of the system. The required transformation level, therefore, needs to be assessed.*

<p>11 - Does the adaptation action consider and ensure that there are no negative effects in the short- and longterm on...</p> <p><i>Some adaptation actions might increase GHG emissions, such as the use of energy-intensive infrastructures like desalination to enhance freshwater supply or air conditioning to deal with heat waves. Instead of tackling climatic risks in the long term, global warming is intensified through these actions, resulting in even higher adaptation needs in the future.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>12 - Does the adaptation action increase resilience in the long-term by transforming existing practices, where required (so-called transformational adaptation)?</p> <p><i>Incremental adaptation (minor adjustments within existing systems) may not always be sufficient to keep pace with the intensifying impacts of climate change. In some cases, transformational adaptation actions (representing a fundamental change in the system, which may also involve changes in the values and objectives of actors) are needed to foster the long-term resilience of the system. The required transformation level, therefore, needs to be assessed.</i></p>				

**Section: Implementing the Adaptation Action**

<p>13 - Have the risks of maladaptation of the adaptation action been discussed with relevant stakeholders?</p> <p><i>Despite growing evidence of maladaptation happening in many sectors and geographical areas, practical knowledge and awareness on the issue remain limited, which needs to be checked before an action is implemented. Consequently, informing stakeholders about the potential negative impacts of adaptation actions and hearing their feedback and insights are crucial to identify and mitigating potential risks of maladaptation in the first place.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>14 - Are mechanisms in place for coordinating the implementation of the adaptation action across sectors?</p> <p><i>As adaptation actions (and their maladaptation risks) are in most cases affecting several sectors (e.g. water, agriculture, health), it is important to coordinate data, strategies, investments and implementation work, etc. to ensure coherence between the actions and use potential synergies.</i></p>				
<p>15 - Are mechanisms in place for coordinating the adaptation action across governance levels (e.g. local, municipal, regional, national)?</p> <p><i>An adaptation action, which is not coordinated across the different levels of decision-making bodies in the respective geographic area, is agreed upon by fewer people with a narrower scope and may not be as coherent, as one that is coordinated and communicated widely. To avoid maladaptation it is important to coordinate across all governance levels as applicable.</i></p>				

**Section: Monitoring and Evaluating the Adaptation Action**

<p>16 - Is the adaptation action monitored and are there mechanisms in place to improve monitoring (if necessary)</p> <p><i>Monitoring should enable keeping the flexibility to respond to uncertainties and changing circumstances (e.g. energy prices, urbanization, change to the effectiveness of the action etc.)to avoid maladaptive effects. Only when adaptation actions are monitored, implementation shortcomings and potential negative effects can be identified at an early stage and the action can be adjusted. Therefore, the budget should also account for the costs of needed adjustments (=contingency costs).</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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17 - Will the impacts of the adaptation action be evaluated?

*The impacts of an adaptation action should be assessed through a thorough process and impact evaluation, covering both the effectiveness of the action (how well it is addressing the respective climate change risk/impact) and positive as well as negative side effects This is not only important to identify potential maladaptive effects, but also to advance the knowledge on adaptation and support a process of learning from past experiences. Timing and frequency of the evaluation shall be fixed in advance.*

YES	PARTIALLY	NO	COMMENTS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

By downloading the PDF you will be able to checkmark the table in two ways: (1) manually, if you print it or (2) with the "x" mark tool in your PDF reader app. For the second option, please remember to save your changes, not to lose your selection before closing the document.

This tool (Version 1, January 2023) has been developed in the framework of the REGILIENCE Project. It is still under improvement, and we aim for a better connection with other adaptation tools and inserting case studies to illustrate challenges and solutions. If you use it, we would be grateful for your feedback, especially on the following questions:

- Is the tool useful and practically applicable?
- Is anything missing that would lead to omitting important maladaptation risks?
- Do you agree with the wording?
- Are the questions clear and fully understandable?

For any questions, collaboration interests, or feedback please contact:  
**Teresa Geidel** (Fresh Thoughts Consulting GmbH), contact: [teresa.geidel@fresh-thoughts.eu](mailto:teresa.geidel@fresh-thoughts.eu)

REGILIENCE, a project funded by the EU Horizon 2020 programme, will support communities, cities, and regions in their efforts toward building climate-resilient pathways. It will facilitate the identification and upscaling of the most promising resilience solutions: supporting their replication in 10 vulnerable and low-capacity regions in Europe; communicating them through various channels and actions; and inspiring policymakers, organisations, and individuals to become part of the change.



[www.regilience.eu](http://www.regilience.eu)

- [info@regilience.eu](mailto:info@regilience.eu)
- [@regilience](https://twitter.com/regilience)
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